

Thermo Scientific  
Nalgene™ Rapid-Flow™ Filters

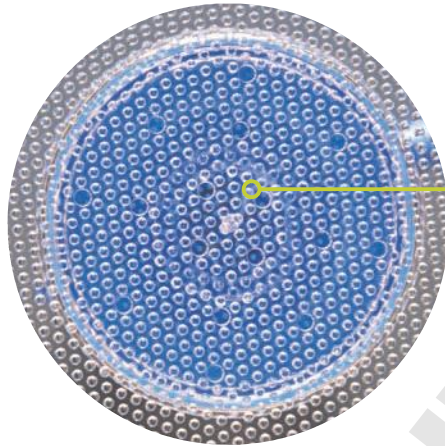
**the last line of defense**  
against contamination

**Thermo**  
SCIENTIFIC

## The Rapid-Flow Advantage.

From the outside, bottle top filters look alike. But, when you look beneath the membrane, glaring differences become apparent. Differences that are critical to the way the filter performs and how it impacts your work.

Thermo Fisher Scientific introduces filter units with the unique Thermo Scientific Nalgene Rapid-Flow design. These filters feature a support system engineered to allow membranes to work at maximum efficiency — providing superior performance and the last line of defense against contamination.



### **Consistently consistent.**

All Nalgene filters now have the Rapid-Flow multi-column membrane-support system. This proprietary system provides a uniform, consistent separation between touchpoints with the membrane, minimizing gap stress to maintain optimal flow.



### **Mind the gaps.**

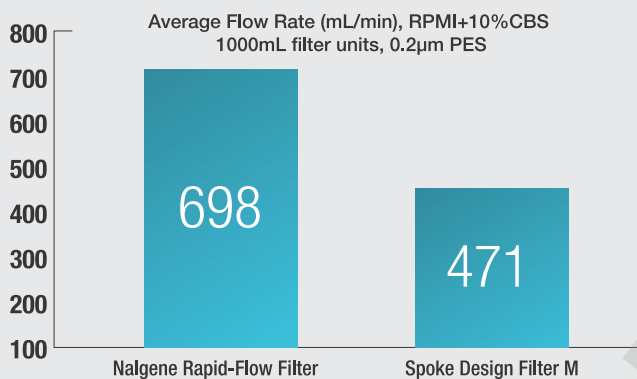
Other filters use a radial spoke support system. The gaps between spokes lack uniformity and consistency in membrane support, leading to increased stress and distortion. The result? Suboptimal flow rate and throughput.



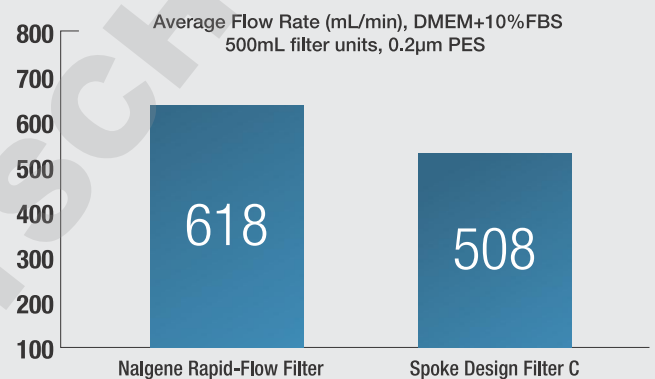
# Performance on many levels.

Testing shows that Rapid-Flow filters deliver superior performance.

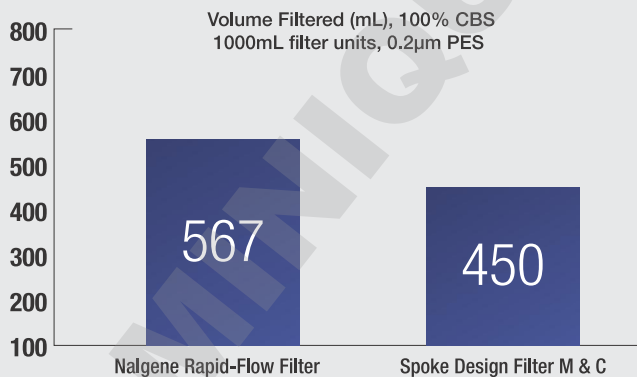
## NALGENE RAPID-FLOW IS FASTER



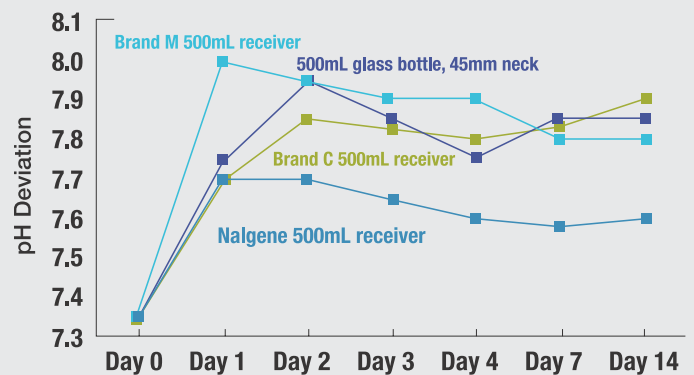
## NALGENE RAPID-FLOW IS FASTER



## NALGENE RAPID-FLOW FILTERS MORE



## NALGENE BOTTLES MINIMIZE pH SHIFT OF STORED MEDIA



# Faster filter.

## Last line of defense.

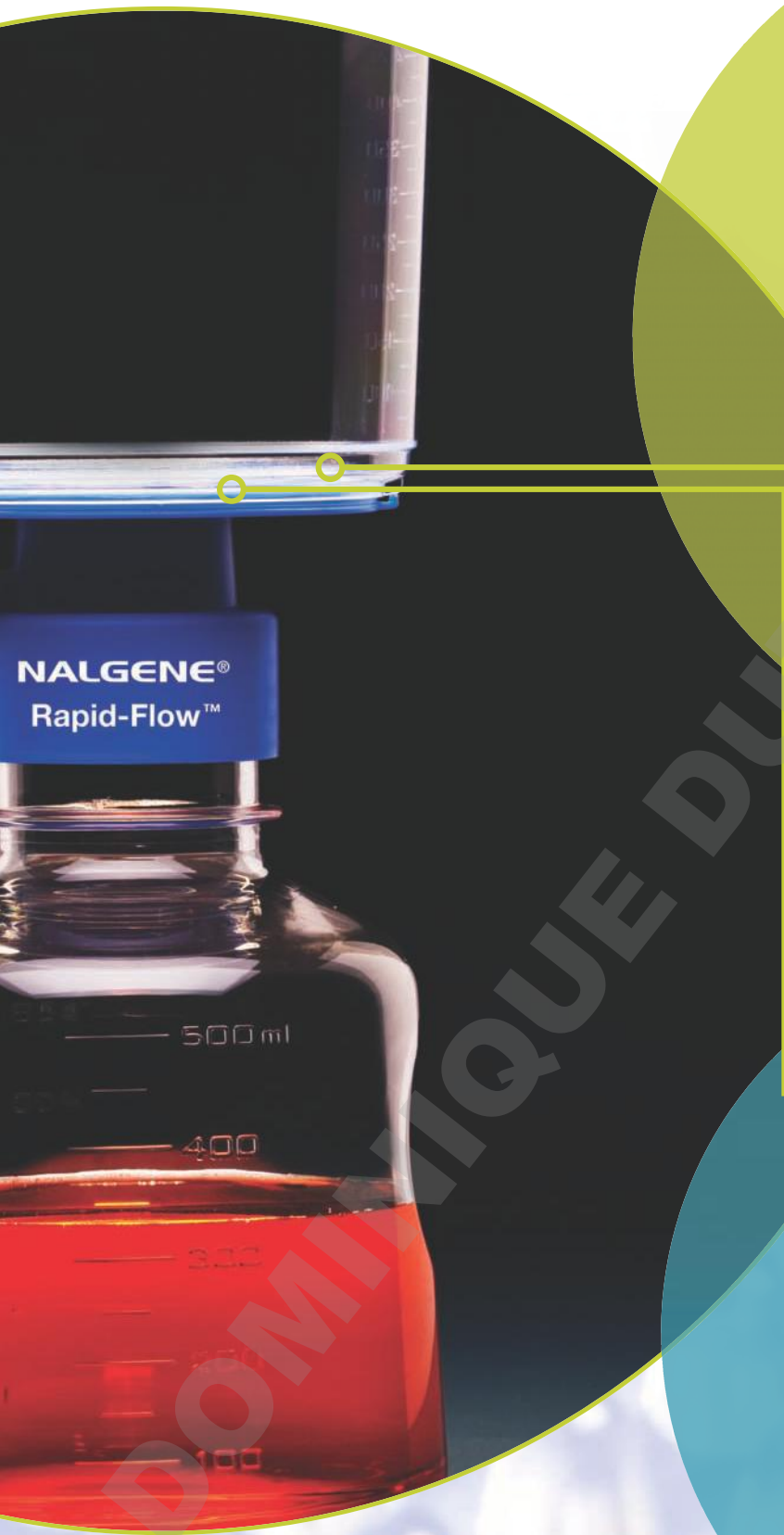
- 0.1 micron filters guard against mycoplasma contamination.
- 0.2 micron filters remove all bacteria.
- 0.45 and 0.8 micron filters for particle removal and fluid clarification.
- 90 mm diameter filters provide large surface area for serum and other hard-to-filter solutions.
- Nalgene Certified. We guarantee it!

## Easy to use shape.

- Ergonomic design.
- 1½ turn screw cap, tapered sides and “grips” make the filter units and storage bottles easy to handle.
- Wide base improves stability on the bench top.



# Filter faster.



## Unbeatable membranes.

No matter what aqueous fluid you're filtering, we have the right membrane for you:

- PES (polyethersulfone)
- SFCA (surfactant-free cellulose acetate)
- CN (cellulose nitrate)
- NYLON

## Critical interface.

Multi-column design delivers uniformity and consistency. The Rapid-Flow membrane support system, when coupled with any of our membrane options, offers fast flow rates and higher throughput.

# Ordering Information

## Nalgene PES

The best choice for cell culture

Polyethersulfone (PES) is the ultimate tissue culture membrane. It's fast and clean. PES is low protein binding, so there is less chance of removing critical protein from your media. It is hydrophilic, so no external wetting agents or surfactants are needed, resulting in low extractables. And it is fast, so you spend less time waiting.

### Nalgene Filters with PES Membrane

Capacity ml	Pore Size µm	Membr. Diam. mm	Fits Bottle Neck Size	Number Per Case	Catalog Number
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#### PES Filter Units

50	0.2	50	Tube	12	564-0020
150	0.1	50	—	12	565-0010
150	0.2	50	—	12	565-0020
150	0.45	50	—	12	165-0045
250	0.1	50	—	12	568-0010
250	0.2	50	—	12	568-0020
250	0.45	50	—	12	168-0045
500	0.1	75	—	12	566-0010
500	0.2	75	—	12	566-0020
500	0.45	75	—	12	166-0045
500	0.2	90	—	12	569-0020
500	0.45	90	—	12	169-0045
1000	0.1	90	—	12	567-0010
1000	0.2	90	—	12	567-0020
1000	0.45	90	—	12	167-0045

#### PES Bottle Top Filters

150	0.2	50	33	12	596-3320
150	0.45	50	33	12	296-3345
150	0.2	50	45	12	596-4520
150	0.45	50	45	12	296-4545
500	0.2	75	33	12	595-3320
500	0.45	75	33	12	295-3345
500	0.2	75	45	12	595-4520
500	0.45	75	45	12	295-4545
1000	0.2	90	33	12	597-3320
1000	0.2	90	45	12	597-4520

## Nalgene SFCA

Surfactant-free cellulose acetate

(SFCA) contains none of the wetting agents found in standard CA (cellulose acetate). These wetting agents have been shown to be toxic to specific cell lines in vitro (1-3). SFCA also has lower protein binding than does standard CA. If you must use CA for media filtration, you owe it to your cell lines to switch to SFCA. SFCA is available only in Nalgene filter units and bottle top filters.

### Nalgene Filters with SFCA Membrane

Capacity ml	Pore Size µm	Membr. Diam. mm	Fits Bottle Neck Size	Number Per Case	Catalog Number
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#### SFCA Filter Units

150	0.2	50	—	12	155-0020
150	0.45	50	—	12	155-0045
250	0.2	50	—	12	157-0020
250	0.45	50	—	12	157-0045
500	0.2	75	—	12	156-4020
500	0.45	75	—	12	156-4045
500	0.2	90	—	12	162-0020
500	0.45	90	—	12	162-0045
1000	0.2	75	—	12	158-0020
1000	0.45	75	—	12	158-0045
1000	0.2	90	—	12	161-0020
1000	0.45	90	—	12	161-0045

#### SFCA Bottle Top Filters

150	0.2	50	33	12	290-3320
150	0.45	50	33	12	290-3345
150	0.2	50	45	12	290-4520
150	0.45	50	45	12	290-4545
500	0.2	75	33	12	291-3320
500	0.45	75	33	12	291-3345
500	0.2	75	45	12	291-4520
500	0.45	75	45	12	291-4545
1000	0.2	90	33	12	292-3320
1000	0.2	90	45	12	292-4520

**References:** 1. Harrison KL, et al. Embryotoxicity of micropore filters used in liquid sterilization. *J In Vitro Fert Embryo Transf.* 1990;7(6):347-350. 2. Wakeland JR, et al. Toxicity to organ cultured hearts of media prepared with disposable filter units. *In Vitro.* 1982;18(8):715-718. 3. Engel F. The effect of membrane filters on cultured cells. *J Pharm Pharmacol.* 1982;34:283-286.

## Nalgene NYLON

Alcohol resistant

Nylon is tough, alcohol resistant, and has a low level of extractables. These membrane factors make it the choice for special applications.

### Nalgene Filters with Nylon Membrane

Capacity ml	Pore Size µm	Membr. Diam. mm	Number Per Case	Catalog Number
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#### Nylon Filter Units

150	0.2	50	12	150-0020
150	0.45	50	12	150-0045
250	0.2	50	12	153-0020
250	0.45	50	12	153-0045
500	0.2	75	12	151-4020
500	0.45	75	12	151-4045
500	0.2	90	12	163-0020
500	0.2	90	12	164-0020
1000	0.2	75	12	154-0020
1000	0.45	75	12	154-0045

## Nalgene CN

For filtration of buffers

Cellulose nitrate (CN) membranes are ideal for filtering and clarifying buffers and other aqueous solutions when protein binding is not a concern. Nalgene CN membranes are TRITON X<sup>®</sup>-free.

### Nalgene Filters with CN Membrane

Capacity ml	Pore Size µm	Membr. Diam. mm	Number Per Case	Catalog Number
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#### CN Filter Units

150	0.2	50	12	125-0020
150	0.45	50	12	125-0045
150	0.8	50	12	125-0080
250	0.2	50	12	126-0020
250	0.45	50	12	126-0045
250	0.8	50	12	126-0080
500	0.2	75	12	450-0020
500	0.45	75	12	450-0045
500	0.8	75	12	450-0080
1000	0.2	75	12	127-0020
1000	0.45	75	12	127-0045
1000	0.8	75	12	127-0080

### Nalgene Storage Bottles

Capacity ml	Number Per Case	Catalog Number
150	24	455-0150
250	24	455-0250
500	12	455-0500
1000	12	455-1000

### Nalgene Storage Bottles

Perfect for storing filtered media and other aqueous fluids. Leak-proof cap eliminates pH shift for longer media life. Fits all Nalgene Bottle Top Filters with 45mm neck thread.

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